[0082] **FIG. 7A** shows a perspective view of a one-nozzle electrospray device of the present invention generating one electrospray plume from one nozzle.

[0083] **FIG. 7B** shows a perspective view of a, one-nozzle electrospray device of the present invention generating two electrospray plumes from one nozzle.

[0084] **FIG. 7C** shows a perspective view of a one-nozzle electrospray device of the present invention generating three electrospray plumes from one nozzle.

[0085] **FIG. 7D** shows a perspective view of a one-nozzle electrospray device of the present invention generating four electrospray plumes from one nozzle.

[0086] **FIG. 8A** shows a video capture picture of a micro-fabricated electrospray nozzle generating one electrospray plume from one nozzle.

[0087] **FIG. 8B** shows a video capture picture of a micro-fabricated electrospray nozzle generating two electrospray plumes from one nozzle.

[0088] **FIG. 9A** shows the total ion chromatogram (TIC) of a solution undergoing electrospray from a single nozzle generating one through four electrospray plumes.

[0089] **FIG. 9B** shows the mass chromatogram for the protonated analyte at m/z 315. Region **1** is the resulting ion intensity from one electrospray plume from one nozzle. Region **2** is from two electrospray plumes from one nozzle. Region **3** is from three electrospray plumes from one nozzle. Region **4** is from four electrospray plumes from one nozzle. Region **5** is from two electrospray plumes from one nozzle.

[0090] **FIG. 10A** shows the mass spectrum from region I.

[0091] **FIG. 10B** shows the mass spectrum from region II.

[0092] **FIG. 10C** shows the mass spectrum from region III.

[0093] **FIG. 10D** shows the mass spectrum from region IV.

[0094] **FIG. 11** is a chart of the ion intensity for m/z 315 versus the number of electrospray plumes emanating from one nozzle.

[0095] **FIG. 12A** is a cross-sectional view of two adjacent 20 gm diameter nozzles with heights of 50 μm. The nozzles are 120 μm center-to-center spaced. The fluid has a voltage of 1000 V, substrate has a voltage of zero V and a third electrode (not shown due to the scale of the figure) is located 5 mm. from the substrate and has a 10 voltage of zero V. The equipotential field lines are shown in increments of 50 V.

[0096] **FIG. 12B** is an expanded region around the nozzles shown in **FIG. 11A**.

[0097] **FIG. 12C** is a cross-sectional view of two adjacent 20 μm, diameter nozzles with heights of 50 μm. The fluid has a voltage of 1000V, substrate has a voltage of zero V and a third electrode (not shown due to the scale of the figure) is located 5 mm. from the substrate and has a voltage of 800 V. The equipotential field lines are shown in increments of 50 V.

[0098] **FIG. 12D** is a cross-sectional view of two adjacent 20 μm diameter nozzles with heights of 50 μm. The fluid has a voltage of 1000 V, substrate has a voltage of 800 V and a third electrode (not shown due to the scale of the figure) is located 5 mm from the substrate and has a voltage of zero V. The equipotential field lines are shown in increments of 50 V.

[0099] **FIG. 13A** is a plan view of mask one of a two-nozzle electrospray device.

[0100] **FIG. 13B** is a cross-sectional view of silicon substrate **200** showing photoresist layer **208** and silicon dioxide layers **210** and **212**.

[0101] **FIG. 13C** is a cross-sectional view of a silicon substrate **200** showing removal of photoresist layer **208** to form a pattern of **204** and **206** in the photoresist.

[0102] **FIG. 13D** is a cross-sectional view of a silicon substrate **200** showing removal of silicon dioxide **210** from the regions **214** and **216** to expose the silicon substrate **218** and **220** in these regions to form a pattern of **204** and **206** in the silicon dioxide **210**.

[0103] **FIG. 13E** is a cross-sectional view of a silicon substrate **200** showing removal of photoresist **208**.

[0104] **FIG. 14A** is a plan view of mask two of a two-nozzle electrospray device.

[0105] **FIG. 14B** is a cross-sectional view of silicon substrate **200** of **FIG. 13E** with a new layer of photoresist **226** on silicon dioxide layer **212**.

[0106] **FIG. 14C** is a cross-sectional view of a silicon substrate **200** showing of removal of photoresist layer **226** to form a pattern of **224** in the photoresist and exposing the silicon dioxide **228** of silicon dioxide layer **212**.

[0107] **FIG. 14D** is a cross-sectional view of a silicon substrate **200** showing the removal of silicon dioxide **228** from the region **224** to expose the silicon substrate **230**.

[0108] **FIG. 14E** is a cross-sectional view of a silicon substrate **200** showing removal of silicon **230** from region **224** to form reservoir **232** in the pattern of **224**.

[0109] **FIG. 15A** is a plan view of mask three of a two-nozzle electrospray device.

[0110] **FIG. 15B** is a cross-sectional view of a silicon substrate **200** showing a new layer of photoresist **208**' on silicon dioxide layer **210**.

[0111] **FIG. 15C** is a cross-sectional view of a silicon substrate **200** showing removal of photoresist layer **208** to form pattern **204** in the photoresist exposing the underlying silicon substrate **218** in the pattern of **204**.

[0112] **FIG. 15D** is a cross-sectional view of a silicon substrate **200** showing removal of silicon material **234** corresponding to the pattern **204** until the reservoir **232** is reached.

[0113] **FIG. 15E** is a cross-sectional view of a silicon substrate **200** showing removal of photoresist **208**' and **226**.

[0114] **FIG. 15F** is a cross-sectional view of a silicon substrate **200** showing thermal oxidation of the exposed silicon substrate **200** to form a layer of silicon dioxide **236** and **238** on exposed silicon horizontal and vertical surfaces, respectively.

[0115] **FIG. 15G** is a cross-sectional view of a silicon substrate **200** showing selective removal of silicon dioxide